

*Modern Methods in Plant Taxonomy*. Edited by V. H. HEYWOOD. xvi + 312 pp. Academic Press, London and New York. 1968. 84s.

This collection of papers is one of the best surveys of current trends in plant taxonomy published to date. The papers were presented at the conference on Modern Methods in Plant Taxonomy which was held at the University of Liverpool in September of 1967. Included in this volume, in addition to the introduction by V. H. Heywood, are 16 papers grouped somewhat arbitrarily under the following four headings: The Continuing Role of the Modern Herbarium in Taxonomic Research; The Role of Experimental Data; Biochemistry, Computers, and Taxonomy; and Geography and Ecology.

In general, the various authors reviewed recent developments, discussed particular problems, and presented original work in areas of interest to the plant systematist. However, not only do these papers form a comprehensive discussion of Modern Methods in Plant Taxonomy, but when viewed collectively they also emphasize the various philosophical differences which exist within the field. One has only to read, for example, the papers by Cronquist, Solbrig, and Johnson and Holm, to detect that the meaning or value assigned to such concepts as "phylogenetic classification" and "biological species," are quite different, if not diametrically opposed. Nevertheless, this dimension of the book should not obscure its basic importance, an excellent review and analysis of modern plant taxonomy as well as an indication of its future directions.—DENNIS R. PARNELL, Department of Biological Science, California State College, Hayward.

*Pacific Northwest Ferns and Their Allies*. By THOMAS M. C. TAYLOR. x + 248 pp., illustrated. Univ. of Toronto Press, Toronto and Buffalo. 1970. \$15.00.

Renewed interest in pteridophytes during the past two decades has resulted in an eminently more natural classification system. A consequence of this research is the outdating of older floristic treatments. Taylor's book on the Pacific Northwest ferns and their allies helps fill this gap by bringing together our present knowledge of these plants in a well-documented but aesthetically pleasing format.

By the author's estimate, about one-quarter of the known species of pteridophytes occurring on the North American continent north of Mexico are to be found in the area treated (Oregon, Washington, British Columbia, and Yukon Territory, and Alaska excluding the Aleutian Islands). Not surprisingly, 45% of the 97 species Taylor records for the area are circumboreal.

Keys and concise descriptions are provided for families, genera, and species. Synonymy, although not complete, is adequate for the purposes of a flora. References are given to earlier floristic treatments and illustrations. Habitat and range are given for all species. Brief comments include mention of diagnostic features, cytological data, and taxonomic problems requiring additional study. Full page original line drawings, showing both habit and details, are provided for each species; although somewhat stylized, these are entirely adequate in most cases for identification. Chromosome numbers (with references) and lists of species grouped by distributional patterns are listed in appendices. That the pteridophytes of the area are exceptionally well studied cytologically is evident from the fact that only 18 taxa remain uncounted.

The author wisely relies on the judgments of monographers in treating many of the critical genera, including *Pellaea*, *Woodsia*, *Cystopteris*, *Botrychium*, and *Equisetum*, while incorporating the most recent biosystematic data available in the treatment of such genera as *Polystichum*, *Dryopteris*, and *Polypodium*. He recognizes such "splinter" genera as *Mecodium* (*Hymenophyllum*) and *Aspidotis* (*Cheilantes*), but maintains *Thelypteris* and *Lycopodium* in a broad sense.